



EU-TYPE EXAMINATION CERTIFICATE

Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

Certificate Number: **Sira 17ATEX2083X** Issue: **15**

Equipment: **Model G7c Portable Safety Monitor and Gas Detection Equipment
Model ACC-G7-BAT auxiliary battery module**

Applicant: **Blackline Safety**

Address: **Unit 100, 803 - 24 Ave SE
Calgary, Alberta T2G 1P5 Canada**

This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-1:2014

If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:

Model G7 and G7c:



II 1G
Ex ia IIC T4 Ga
Ex da ia IIC T4 Ga (with pellistor sensor)
Ta = -20°C to +55°C

Model G7x:



II 1G
Ex ia IIC T4 Ga
Ta = -20°C to +55°C

Signed:

Michelle Halliwell

Title: Senior Director of Operations



Project Number 80244299

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13 DESCRIPTION OF EQUIPMENT

G7* Portable Gas Detectors combining a Base Unit with a Gas Cartridge

Base unit – P/N "G7*-" (Where * = c or x or blank; # = NA, EU or AZ).

Gas Cartridge – Where # = Electro chemical sensor identifier or "X" indicating no sensor

No Gas Module P/N "Z"

Single Gas Module P/N "S-#"

Multi Gas Module P/N "Q-####"

Pump Module P/N "P-####"

Auxiliary battery – P/N "ACC-G7-BAT"

Battery powered (3.8V nominal Lithium); Temperature Code T4,
Ambient temperature range of $-20^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$.

The G7c is a worker monitoring and gas detection instrument that collects real-time information, such as, surrounding environmental conditions, the worker's location and their movement to detect falls and no-motion, any of which could trigger an alert when reported back to a central server through the cellular network. Location information is calculated using a combination of GPS, proprietary indoor beacons and cellular triangulation. The G7c is a body-worn device powered by a 3.8 V, lithium polymer battery. There are three, basic versions of the G7c, all of which use a common, main base unit fitted with any one of the following, interchangeable cartridges:

- a standard cartridge with no-gas module
- a single-gas cartridge (the type of gas sensor can be selected according to application)
- a Multi-gas cartridge (the types of gas sensor can be selected according to application)

Internally, the G7* consists of a main microprocessor, an inertial motion unit, a GPS receiver, a 3G cellular transceiver, a magnetic speaker, a vibration motor, a microphone, an LCD screen, a lithium polymer battery, momentary switches, and various other supporting components. User input is registered through the momentary switches, a reed switch, and the microphone. Instrument output is given through the LCD screen, LEDs, the vibrator, and the speaker.

The G7 main board is an updated version of the G7c main board. The most significant deviation from the G7c is the addition of the 900MHz transceiver module MOD900 (Part no: CMWX1ZZABZ-078, Manufacturer: Murata).

The G7c and G7 main unit is approved and marked for Ex ia IIC T4 Ga.

All the gas modules that are used with the main unit are approved for Ex ia IIC T4 Ga but are not marked as such since this marking is on the main unit already.

The G7c and G7 unit with pellistor sensor is approved and marked for Ex da ia IIC T4 Ga as the pellistor sensor is certified to Ex da IIC Ga under OBAC 18 ATEX 0024U and IECEx OBAC 18.0001U.

The G7x main unit is approved and marked for Ex ia IIC T4 Ga.

The ACC-G7-BAT is an auxiliary battery that can be connected to all G7 instruments and safely provide additional battery life. This battery pack is intended to augment the internal battery of the G7 instruments. Any high current pulses (e.g. RF transmissions) will still utilize the G7 battery, however, the ACC-G7-BAT is intended to supply current to cover the average current draw of the G7 instruments.

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Variation 1 - This variation introduced the following changes:

- i. The Marking applicable to each of the G7c versions was clearly defined, thus allowing the Specific Condition of Use associated with marking to be removed. (Note: the type of sensors used in the construction the quad-gas cartridges affects the overall marking attributed to the equipment, a new Condition of Manufacture ensures that the products will not be marked with conflicting information.)
- ii. The Description of Equipment was amended to make the association of the main base unit with the interchangeable cartridges clearer and to recognise throughout that the product name is G7c.
- iii. The value of current in the Specific Condition of Use that defines the requirements for charging was increased from 1 A to 2 A.
- iv. The 100 pF capacitors C815, C816 and C817 were removed.
- v. A 1 µF capacitor, C115, was added.
- vi. U81 was renamed as U801.
- vii. Ri114, Ri124, Ri134, Ri152, Ri316, Ri317, and Ri318 are now on a range of 300 Ω to 350 Ω. Ri120, Ri122, Ri130, Ri132, Ri140, and Ri142 were adjusted to set the current clamp shut-off value to match the calculated value.
- viii. Uncontrolled resistors R815, R816 and R817 were removed.
- ix. The PCB layout was modified to remove conformal coating requirements.
- x. The standard cartridge with no-gas module was modified to move the crystal on the microcontroller and to address a mechanical interference issue.
- xi. The single-gas cartridge PCBA was modified by adding one footprint for a small decoupling capacitor to increase RF immunity.
- xii. The requirement to routinely test the RF Shutoff Circuit active current limiter is no longer needed, therefore, the Condition of Manufacture was removed.

Variation 2 - This variation introduced the following changes:

- i. The introduction of the quint-gas cartridge, the quad and quint gas cartridges are generically known as a multi-gas cartridge.
- ii. The introduction of a new single gas cartridge that is used PID and CO₂ sensors only; the previous model supports electrochemical sensors.

Variation 3 - This variation introduced the following changes:

- i. Revision to Quint-gas Cartridge Module to add components C201, C218, R111, R214, R215 and R216.
- ii. Revision to Single-Gas PID Cartridge Module to add components C201, C218, R214, R216 and to remove components iR200, iR204, iR206, R201, R202, R203, R204, R205, R207, R211, R212, R213, C209, C216, C217, U201.

Variation 4 - This variation introduced the following changes:

- i. Replacement of the existing component certified pellistor sensor VQ548MP with the new component certified Catalytic gas sensor type VQ548MP-DA., resulting in EN 60079-1:2014 being added to the list of standards with the relevant change to the marking.
- ii. Addition of an alternative non-metallic front label material.
- iii. The manufacturer documents were updated incorporating editorial changes.
- iv. The product description is changed to address the change in the terminology "quad and Quint-gas" to "Multi-gas" and to include the component certification details of pellistor sensor that is fitted with the multi-gas cartridge.

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- v. The marking section is changed to address the removal of marking "Ex ia IIB and Group II Category 2 Ex ib IIC" and add "da" protection level to "Ex ia IIC" based on modification i above.

Variation 5 - This variation introduced the following change:

- i. The addition of new capacitors and resistors in the G7c multi-gas cartridge module.

Variation 6 - This variation introduced the following changes:

- Addition of pump board (two designs) to the quint gas module.
- Update to the main board.
- Update to the single gas module.
- Update to the G7 speaker board.
- Update to the Manufacturer's documentation based on the above modifications.

Variation 7 - This variation introduced the following changes:

- Addition of G7 main board.
- Addition of ACC-G7-BAT auxiliary battery module.
- Update to the existing Microphone board.
- Performance of the following tests,
 - Li-ion battery (Model no: GP603954 and YE503759) test
 - Thermal test of LED for use in G7 quint gas cartridge
 - Surface resistivity test of polyonics XT-637

- v. The applicant and manufacturer address was changed:

From	To
Suite 101, 1215 – 13 St SE, Calgary, Alberta, T2G 3J4, Canada	Unit 100, 803 - 24 Ave SE Calgary, Alberta T2G 1P5 Canada

- vi. The description was amended as a result of the above changes.

Variation 8 - This variation introduced the following change:

- i. Addition of new combustible gas sensor (MPS4) for quint gas cartridge module

Variation 9 - This variation introduced the following changes:

- Update to main board.
- Update to multi-gas diffusion and pump module.
- Minor update to no gas module and single gas module.
- Addition of City Tech 4P75C pellistor sensor.
- Revisions of Manufacture's documents to cover changes for items 1 to 4

Variation 10 - This variation introduced the following changes:

- Address changes on G7c Main Board.
- Address harmonization of G7x Main Board schematic with G7c Main board schematic.
- Assessment of G7x Mlink Ultra radio module and circuitry to harmonize the design with G7c.
- Based on the harmonized circuitry, update G7x ratings from 'Ex ib' to 'Ex ia'.
- Addition of Model G7x within ATEX Certificate SIRA 17ATEX2083X. The description was amended to reflect this change.
- Update EN 60079-0:2012 to EN IEC 60079-0:2018.

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Variation 11 - This variation introduced the following changes:

- i. To permit the use of alternative Integrated Circuits.
- ii. To permit the use of alternative encapsulants.
- iii. To permit the use of an alternative enclosure material.
- iv. To permit a number of drawing changes.

Variation 12 - This variation introduced the following change:

- i. Update multiple PCBs for component changes and component additions.

Variation 13 - This variation introduced the following change:

- i. Update multiple PCBs for component changes and component additions.

Variation 14 - This variation introduced the following change:

- i. Minor drawing correction.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	07 April 2017	R70106936A	The release of the prime certificate.
1	27 July 2017	R70131436A	The introduction of Variation 1.
2	05 December 2017	R70151733A	The introduction of Variation 2.
3	10 January 2018	R70165246A	The introduction of Variation 3.
4	23 May 2018	R70172236A	The introduction of Variation 4.
5	25 May 2018	R70175996A	The introduction of Variation 5.
6	18 October 2018	R70186240A	The introduction of Variation 6.
7	15 October 2019	0477	Transfer of certificate Sira 17ATEX2083X from Sira Certification Service to CSA Group Netherlands B.V.
8	10 January 2020	R70216432A	The introduction of Variation 7.
9	16 January 2020	R80020209A	The introduction of Variation 8.
10	10 May 2022	R80075886A	The introduction of Variation 9.
11	13 June 2022	R80114155A	The introduction of Variation 10.
12	10 January 2023	R80136894A	The introduction of Variation 11.
13	27 March 2024	R80180067A	The introduction of Variation 12.
14	07 October 2024	R80214891A	The introduction of Variation 13.
15	18 March 2025	R80244298A	The introduction of Variation 14.

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15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

- 15.1 The equipment shall only be charged when in the non-hazardous area using a charger specifically supplied for use with the unit (for example part number SAW06D-050-1000xx, manufactured by Shenzhen Shi Ying Yuan Electronics Co., Ltd.), approved as SELV or Class 2 equipment against IEC 60950, IEC 61010-1 or an equivalent IEC standard. The maximum voltage and current from the charger shall not exceed 5.625Vdc and 2A respectively.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 The G7 / G7c / G7x incorporates a previously certified combustible and pellistor gas sensor. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device. The manufacturer shall inform CSA of any modifications to the device that may impinge upon the explosion safety design of the gas detector.

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Certificate Annexe



Certificate Number: Sira 17ATEX2083X

Equipment: Model G7c Portable Safety Monitor and Gas Detection Equipment
Model ACC-G7-BAT auxiliary battery module

Applicant: Blackline Safety

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
01329-21257	1 to 7	H	09 Mar 17	Front Shell
01329-A6959	1 to 7	F	09 Mar 17	Back Shell
01329-21261	1 to 4	C	09 Mar 17	Latch
01329-24672	1 to 6	E	09 Mar 17	No Gas Front Shell
01329-24673	1 to 6	F	09 Mar 17	No Gas Back shell
01329-21259	1 to 6	F	09 Mar 17	Single Module Front Shell
01329-21260	1 to 6	F	09 Mar 17	Single Module Back Shell
01329-24836	1 to 6	B	09 Mar 17	Quad Module Front Shell
01329-24837	1 to 6	D	09 Mar 17	Quad Module Back Shell
00842-L117	1 of 1	A	09 Mar 17	Belt Clip
01329-A7200	1 of 1	H	09 Mar 17	Membrane Assy
01329-21819	1 of 1	B	09 Mar 17	Back Label
01329-24839	1 of 1	A	09 Mar 17	Quad Module Label
01329-A6931	1 of 1	A	09 Mar 17	Main PCB Potting Bottom
01329-A6931	1 of 1	A	09 Mar 17	Main PCB Potting Top
CC G7C	1 to 2	1.0	22 Mar 17	Main PCB Conformal Coat
SCH 101983	1 to 12	04	09 Mar 17	SCH Main Board
SCH 102105	1 of 1	00	09 Mar 17	SCH Microphone
SCH 102106	1 of 1	01	09 Mar 17	SCH Speaker
SCH 102148	1 of 1	01	09 Mar 17	SCH No Gas
SCH 102260	1 of 1	04	22 Mar 17	SCH Single Gas
SCH 102261	1 to 7	02	22 Mar 17	SCH 4 Gas Digital
SCH 102317	1 to 7	02	22 Mar 17	SCH 4 Gas Pellistor
BOM 101983	1 to 3	04	09 Mar 17	BOM Main Board
BOM 102105	1 of 1	00	09 Mar 17	BOM Microphone
BOM 102106	1 of 1	01	09 Mar 17	BOM Speaker
BOM 102148	1 of 1	01	09 Mar 17	BOM No Gas
BOM 102260	1 to 2	04	09 Mar 17	BOM Single Gas
BOM 102261	1 to 2	02	09 Mar 17	BOM 4 Gas Digital
BOM 102317	1 to 2	02	22 Mar 17	BOM 4 Gas Pellistor
PCB 101970	1 to 28	02	09 Mar 17	PCB Main Board
PCB 102103	1 to 20	00	09 Mar 17	PCB Microphone
PCB 102104	1 to 20	01	09 Mar 17	PCB Speaker
PCB 102144	1 to 20	01	09 Mar 17	PCB No Gas
PCB 101989	1 to 20	04	09 Mar 17	PCB Single Gas
PCB 102146	1 to 22	02	09 Mar 17	PCB 4 Gas Digital
PCB 102145	1 to 22	02	09 Mar 17	PCB 4 Gas Pellistor
PCB G7PCM	1 to 20	00	09 Mar 17	PCB G7CPCM
L-A8189	1 to 2	A	09 Mar 17	Narada G7C Battery pack
0186_SA_MD	1 of 1	1	28 Mar 17	G7 Product Label
0279_SA_MD	1 of 1	2	05 Apr 17	G7 Quad Gas Cartridge Product Label

Issue 1

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Description
SCH 101983	1 to 12	05	09 Jun 17	SCH Main Board
BOM 101983	1 to 3	05	09 Jun 17	BOM Main Board

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Equipment: Model G7c Portable Safety Monitor and Gas Detection Equipment
Model ACC-G7-BAT auxiliary battery module

Applicant: Blackline Safety

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Description
PCB 101970	1 to 28	03	09 Jun 17	PCB Main Board
SCH 102148	1 of 1	02	12 Jul 17	SCH No Gas
SCH 102260	1 of 1	05	12 Jul 17	SCH Single Gas
BOM 102148	1 of 1	02	12 Jul 17	BOM No Gas
BOM 102260	1 to 2	05	12 Jul 17	BOM Single Gas
PCB 102144	1 to 20	02	12 Jul 17	PCB No Gas
PCB 101989	1 to 20	05	12 Jul 17	PCB Single Gas

Issue 2

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Description
BOM_102433	1 to 1	01	06 Oct 17	G7 Single-Gas Cartridge (PID, CO2)
BOM_102414	1 to 2	01	06 Oct 17	G7 Quint-Gas Cartridge (LEL - IR, PEL; COSH; O2; AG, PID, CO2)
PCB_102413	1 to 15	01	29 Sep 17	G7QGCTG-01-xx
PCB_102432	1 to 15	01	29 Sep 17	G7PIDCTG-01-xx
PCB_102449	1 to 15	01	29 Sep 17	G7QGCTG-01-xx (S2-PID)
SCH_102433	1 to 4	01	29 Sep 17	G7 Quint-Gas Cartridge Block Diagram (Single Gas)
SCH_102414	1 to 7	01	29 Sep 17	G7 Quint-Gas Cartridge Block Diagram (Quint Gas)
0279_SA_MD	1 of 1	2	28 Nov 17	G7 Quad Gas Cartridge Product Label

Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
SCH_102414	1 to 7	03	21 Dec 17	G7 Quint-Gas Cartridge Block Diagram (Quint Gas)
BOM_102414	1 to 1	03	21 Dec 17	G7 Quint-Gas Cartridge (LEL - IR, PEL; COSH; O2; AG, PID, CO2)
PCB_102449	1 to 15	03	21 Dec 17	G7QGCTG-03-xx (S2-PID)
PCB_102413	1 to 15	03	21 Dec 17	G7QGCTG-03-xx
SCH_102433	1 to 4	02	21 Dec 17	G7 Quint-Gas Cartridge Block Diagram (Single Gas)
BOM_102433	1 to 1	02	21 Dec 17	G7 Single-Gas Cartridge (PID, CO2)
PCB_102432	1 to 15	02	21 Dec 17	G7PIDCTG-01-xx

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
0186_SA_MD	1 of 1	3	16 Mar 18	G7 Product label
01329-A11824	1 of 1	A	08 Feb 18	Front label (alternate material)
20180308	1 of 1	1	09 Mar 18	Multi-Gas Mechanical Capture of sensors

Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
BOM_102414	1 to 1	04	06 Mar 18	G7 Quint-Gas Cartridge (LEL - IR, PEL; COSH; O2; AG, PID, CO2)
SCH_102414	1 to 7	04	06 Mar 18	G7 Quint-Gas Cartridge Block Diagram (Quint Gas)
PCB_102413	1 to 15	04	06 Mar 18	G7QGCTG-04-xx
PCB_102449	1 to 15	04	06 Mar 18	G7QGCTG-04-xx (S2-PID)

Issue 6

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
01568-34328	1 of 1	B	11 Sep 18	Loner M7 Quad pump label

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Equipment: Model G7c Portable Safety Monitor and Gas Detection Equipment
Model ACC-G7-BAT auxiliary battery module

Applicant: Blackline Safety

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
01568-34835	1 to 3	C	11 Sep 18	Valve Cap
01568-A12202	1 to 6	B	11 Sep 18	Loner M7 Quad pump back shell w-inserts
01568-A12297	1 to 6	B	11 Sep 18	Loner M7 Quad pump back cover w-insert
BOM_101983	1 to 2	10	11 Sep 18	G7c Main board
BOM_102106	1 of 1	02	11 Sep 18	G7 Speaker board
BOM_102260	1 of 1	07	11 Sep 18	Single Electrochemical Sensor cartridge
BOM_102618	1 of 1	04	11 Sep 18	G7 Pump board
BOM_102618a	1 of 1	05	11 Sep 18	G7 Pump board
PCB_101970	1 to 26	06	11 Sep 18	GasEx (Main Board)
PCB_101989	1 to 20	06	11 Sep 18	LGASCTG-06-xx (Single gas board)
PCB_102104	1 to 20	02	11 Sep 18	G7SPKR-02-xx (Speaker board)
PCB_102596	1 to 15	04	11 Sep 18	G7QGCTG-04-xx(S2-PID,PUMP) (Quint gas board)
PCB_102597	1 to 15	04	11 Sep 18	G7QGCTG-04-xx(S2-EC,PUMP) (Quint gas board)
PCB_102619	1 to 13	04	11 Sep 18	G7PUMP-04-xx (Pump board)
PCB_102619a	1 to 13	05	11 Sep 18	G7PUMP-05-xx (Pump board)
SCH_101983	1 to 12	10	17 Oct 18	Main board
SCH_102106	1 of 1	02	12 Sep 18	LATEX Speaker (Speaker board)
SCH_102260	1 of 1	07	17 Oct 18	Single gas cartridge
SCH_102618	1 of 1	04	12 Sep 18	Pump test (Pump board)
SCH_102618a	1 of 1	05	12 Sep 18	Pump test (Pump board)

Issue 7. No new drawings were introduced

Issue 8

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
01696-37493	1 of 1	B	19-Sept-19	Holder body (G7 auxiliary battery)
01696-37494	1 of 1	B	19-Sept-19	Button right (G7 auxiliary battery)
01696-37495	1 of 1	B	19-Sept-19	Button left (G7 auxilliary battery)
01696-37496	1 of 1	D	19-Sept-19	Batt_Bottom shell (G7 auxiliary battery)
01696-37498	1 of 1	C	19-Sept-19	Batt_Top shell (G7 auxiliary battery)
01696-37500	1 of 1	A	19-Sept-19	PCB_potting_fence (G7 auxiliary battery)
01696-A14154	1 of 1	A	19-Sept-19	PCB_potting (G7 auxiliary battery)
101983	2 of 2	02	24-Sept-19	BOM G7 Main board
102855	1 of 1	05	04-Oct-19	BOM G7 auxiliary battery
102896	1 to 26	02	19-Sept-19	PCB G7 Main board
102854	1 to 15	05	04-Oct-19	PCB G7 auxiliary battery
102897	1 to 13	02	19-Sept-19	SCH G7 Main board
SCH_102855	1 to 3	05	04-Oct-19	SCH auxiliary battery
0186_SA_MD	1 of 1	4	19-Sept-19	G7 product label
LBL_102921	1 of 1	0	19-Sept-19	G7 auxiliary battery label
01329-21257	1 of 1	K	19-Sept-19	Front shell
102105	1 of 1	01	19-Sept-19	BOM Microphone
102103	1 to 9	01	19-Sept-19	PCB Microphone
102105	1 of 1	01	19-Sept-19	SCH Microphone

Issue 9

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
BOM_102414	1 of 1	07	12 Jan 20	G7 Quint-Gas Cartridge (LEL - IR, PEL; COSH; O2; AG, PID, CO2)

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Model ACC-G7-BAT auxiliary battery module

Applicant: Blackline Safety

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
SCH_102414	1 to 7	07	02 Jan 20	G7 Quint-Gas Cartridge Block Diagram (Quint Gas)
PCB_102413	1 to 15	07	02 Jan 20	G7QGCTG-04-xx
PCB_102449	1 to 15	07	02 Jan 20	G7QGCTG-04-xx (S2-PID)
PCB_102596	1 to 15	07	02 Jan 20	G7QGCTG-04-xx(S2-PID,PUMP) (Quint gas board)
PCB_102597	1 to 15	07	02 Jan 20	G7QGCTG-04-xx(S2-EC,PUMP) (Quint gas board)

Issue 10

Drawing	Sheets	Rev.	Date (Stamp)	Title
BOM_102897	1 to 2	05	12 Apr 2022	G7 Main BOM
SCH_102897	1 of 13	03	12 Apr 2022	G7 Main SCH
PCB_102896	1 of 12	03	12 Apr 2022	G7 Main PCB
BOM_102148	1 of 1	03	12 Apr 2022	G7 NGCTG-03
PCB_102144	1 of 4	03	12 Apr 2022	G7 NGCTG-03
SCH_102148	1 of 1	03	12 Apr 2022	LGAS NO GAS Cartridge
BOM_102432	1 of 1	02	12 Apr 2022	G7 PIDCTG-01 BOM
PCB_102432	1 of 8	02	12 Apr 2022	G7 PIDCTG-01 PCB
SCH_102433	1 of 4	02	12 Apr 2022	G7 Single Gas PID Cartridge Block Diagram
BOM_103731	1 of 1	07	12 Apr 2022	G7 Pump BOM
PCB_103731	1 of 4	07	12 Apr 2022	G7 Pump PCB
SCH_103732	1 of 1	07	12 Apr 2022	G7 Pump Schematic
01329-21257	1 of 1	K	12 Apr 2022	Loner M7 Front Shell
01329-21259	1 of 6	F	12 Apr 2022	Loner_M7_Single_Module_Front_Shell
01329-21260	1 of 6	F	12 Apr 2022	Loner_M7_Single_Module_Back_Shell
01329-21261	1 of 4	C	12 Apr 2022	Loner_M7_Latch
01329-24672	1 of 6	E	12 Apr 2022	Loner_M7_NoGas_Module_Front_Shell
01329-24673	1 of 6	F	12 Apr 2022	Loner_M7_NoGas_Module_Back_Shell
01329-24836	1 of 6	B	12 Apr 2022	Loner_M7_Quad_Module_Front_Shel
01329-24837	1 of 6	D	12 Apr 2022	Loner_M7_Quad_Module_Back_Shel
01329-A6959	1 to 7	F	12 Apr 2022	Loner_M7_Back_Shell
BOM_102414	1 to 2	08	12 Apr 2022	G7 Quint Gas BOM
PCB_102413	1 of 8	08	12 Apr 2022	G7 Quint Gas PCB
SCH_102414	1 of 7	08	12 Apr 2022	G7 Quint-Gas Cartridge Block Diagram
PCB_102449	1 of 8	08	12 Apr 2022	G7QGCTG-PCB S2-PID
PCB_102596	1 of 8	08	12 Apr 2022	G7QGCTGS2-PID-PUMP
PCB_102597	1 of 8	08	12 Apr 2022	G7QGCTG-PCB
BOM_101989	1 of 1	08	12 Apr 2022	G7SGCTG-BOM Single Gas
PCB_101989	1 of 8	07	12 Apr 2022	G7SGCTG-PCB
SCH_102260	1 of 1	07	12 Apr 2022	G7 Single Gas CTG SCH
0149_SA_MD_G7_ User Guide_EN	1 to 48	31	12 Apr 2022	G7 Technical User Manual

Issue 11

Drawing	Sheets	Rev.	Date (Stamp)	Title
SCH_102897	1 to 13	08	06 May 2022	SCH G7 Main Board
BOM_102897	1 to 2	08	06 May 2022	BOM Main Board
PCB_102896	1 to 12	04	06 May 2022	PCB G7 Main Board
SCH_102019	1 to 12	07	06 May 2022	SCH Main Board
BOM_102019	1 to 2	07	06 May 2022	G7x BOM Main Board

Project Number 80244299

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CSA Group Netherlands B.V. Utrechtseweg 310, Building B42, 6812AR Arnhem, The Netherlands

Certificate Annexe



Certificate Number: Sira 17ATEX2083X

Equipment: Model G7c Portable Safety Monitor and Gas Detection Equipment
Model ACC-G7-BAT auxiliary battery module

Applicant: Blackline Safety

Drawing	Sheets	Rev.	Date (Stamp)	Title
PCB_102014	1 to 13	04	06 May 2022	G7x PCB Main Board

Issue 12

Drawing	Sheets	Rev.	Date (Stamp)	Title
01329-21257	1 to 7	O	29 Nov 22	Front Shell
01329-A6959	1 to 7	K	29 Nov 22	Back Shell
01329-21261	1 to 4	E	29 Nov 22	Latch
01329-24672	1 to 6	J	29 Nov 22	NoGas Module Front Shell
01329-24673	1 to 6	K	29 Nov 22	NoGas Module Back shell
01329-21259	1 to 6	K	29 Nov 22	Single Module Front Shell
01329-21260	1 to 6	K	29 Nov 22	Single Module Back Shell
01329-24836	1 to 6	G	29 Nov 22	Quad Module Front Shell
01329-24837	1 to 6	I	29 Nov 22	Quad Module Back Shell
01329-A7200	1 of 1	K	29 Nov 22	Membrane Assy
01568-34835	1 to 3	H	29 Nov 22	Valve Cap
01568-A12202	1 to 6	E	29 Nov 22	Loner M7 Quad Pump Back Shell w-inserts
01568-A12297	1 to 6	E	29 Nov 22	Loner M7 Quad Pump Back Cover w-inserts
01967-46769	1 to 5	E	29 Nov 22	Quad Pump Back Shell
01967-46772	1 to 3	F	29 Nov 22	Pump Back Cover
01329-A6931	1 of 1	C	29 Nov 22	Main PCB Potting Bottom
01329-A6931	1 of 1	C	29 Nov 22	Main PCB Potting Top
106316-G7	1 of 1	O	29 Nov 22	BOM- Approved potting materials
BOM_102897	1 to 2	09	29 Nov 22	G7 BOM Main Board
BOM_102019	1 to 2	08	29 Nov 22	G7x BOM Main Board

Issue 13

Drawing	Sheets	Rev.	Date (Stamp)	Title
BOM_102260	1 of 1	09	14 Mar 24	BOM Single Gas
BOM_102414	1 of 1	7a	14 Mar 24	BOM G7 Quint-Gas Cartridge
BOM_102414	1 to 2	12	14 Mar 24	BOM G7 Quint-Gas Cartridge
BOM_103732	1 of 1	10	14 Mar 24	BOM G7 PUMP
PCB_101989	1 to 10	08	14 Mar 24	PCB Single Gas
PCB_102413	1 to 10	12	14 Mar 24	PCB G7 Quint Gas
PCB_102597	1 to 10	12	14 Mar 24	PCB G7 Quint (EC, pump)
PCB_103731	1 to 4	09	14 Mar 24	PCB G7 PUMP
SCH_101989	1 to 5	08	14 Mar 24	SCH Single Gas
SCH_102414	1 to 8	12	14 Mar 24	BOM G7 Quint-Gas Cartridge
SCH_103732	1 of 1	10	14 Mar 24	SCH G7 PUMP

Issue 14

Drawing	Sheets	Rev.	Date (Stamp)	Title
SCH_102148	1 to 4	07	03 Oct 24	SCH No Gas
BOM_102144	1 of 1	05	03 Oct 24	BOM No Gas
PCB_102144	1 to 8	05	03 Oct 24	PCB No Gas
SCH_102260	1 to 5	10	03 Oct 24	SCH Single Gas
BOM_102260	1 of 1	10	03 Oct 24	BOM Single Gas
PCB_101989	1 to 10	09	03 Oct 24	PCB Single Gas
SCH_102433	1 to 5	05	03 Oct 24	SCH G7 Single Gas

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Certificate Annexe



Certificate Number: Sira 17ATEX2083X

Equipment: Model G7c Portable Safety Monitor and Gas Detection Equipment
Model ACC-G7-BAT auxiliary battery module

Applicant: Blackline Safety

Drawing	Sheets	Rev.	Date (Stamp)	Title
BOM_102433	1 of 1	05	03 Oct 24	BOM G7 Single-Gas Cartridge
PCB_102432	1 to 9	05	03 Oct 24	PCB G7 Single Gas
SCH_103732	1 of 1	11	03 Oct 24	SCH G7 PUMP
BOM_103732	1 of 1	11	03 Oct 24	BOM G7 PUMP
PCB_103731	1 to 6	10	03 Oct 24	PCB G7 PUMP
SCH_102148	1 to 4	07	03 Oct 24	SCH No Gas
BOM_102144	1 of 1	05	03 Oct 24	BOM No Gas

Issue 15

Drawing	Sheets	Rev.	Date (Stamp)	Title
BOM_102433	1 of 1	05a	27 Feb 25	BOM G7 Single-Gas Cartridge

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